

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 2 and 7 are rejected under 35 U.S.C. 102(b) as being anticipated by Harris (US 5,725,814).

In regards to claim 1, Harris discloses a coextrusion system that employs two or more extruders, each with a gear pump at its output connected to a coextrusion die (abstract). Different materials are extruded by each extruder (abstract). Varying the speed of one or both gear pumps, varies the content of the extrudate (abstract). The coextrusion changes from one material to another gradually or varies along its length in the relative content of the two or more constituent materials (col. 1 lines 23-34). An application is the extrusion of a product that gradually changes from one color to another along a predetermined path, thus forming a gradient of color (col. 3 lines 63-63). A layer of one material is extruded have a thickness continuously varied in a predetermined direction while the full thickness is substantially constant along the predetermined direction (fig. 2 and col. 7 lines 19-20).

In regards to claim 2, Harris discloses the predetermined direction is a direction parallel to the extruding direction of at least one layer of the product (fig. 2).

In regards to claim 7, Harris discloses that the coextrusion systems forms profiles, sheets, blown films, tubes, pipes, etc. (col. 4 lines 62-63).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 3-4 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Harris (US 5,725,814) in view of Ono et al. (JP 05-220739).

Harris discloses a co-extrusion system that employs two or more extruders, each with a gear pump at its output connected to a co-extrusion die (abstract). Different materials are extruded by each extruder (abstract). Varying the speed of one or both gear pumps, varies the content of the extrudate (abstract). An application is the extrusion of a product that gradually changes from one color to another along a predetermined path, thus forming a gradient of color (col. 3 lines 63-63). A layer of one material is extruded have a thickness continuously varied in a predetermined direction while the full thickness is substantially constant along the predetermined direction (fig. 2 and col. 7 lines 19-20).

Harris is silent with regards to the intersection of the predetermined direction.

Ono discloses that a conventional equipment to form a multilayer parison with a primary and secondary resins that flow down two separate paths [0002]. The amount

thickness of the layers is controlled by the flow of the resin through the co-extrusion machine [0002]. This type of equipment produces a parison that joins the principal member resin and secondary-member resin to form a shape of a straight line parallel to a parison axial center [0003]. Ono discloses that a parison can be made where if one wanted to make a predetermined configuration, i.e. a snake like column, then this would be possible using a rotatable path for the secondary-member [0004]. The path rotates on a predetermined period, thus providing a constant thickness [0005].

Harris and Ono use a similar co-extrusion system that uses two or more extruders and the thickness of the layers is controlled by the speed of the flow of the extrudate through the co-extrusion machine. Thus, it would be obvious to one of ordinary skill in the art to combine the gradient affect with colors shown by Harris with the intersecting extruding direction of Ono to form a product that can have various designs, colors, and mask the yellowness that is formed from the co-extrusion process.

Response to Arguments

5. Applicant's arguments with respect to claims 1-7 have been considered but are moot in view of the new ground(s) of rejection.

The applicant argues that the Ono fails to teach varying the thickness in the color layer while maintaining a full thickness of the body substantially constant.

Ono teaches the intersecting pattern that the applicant claims and also describes that the thickness of the layers is controlled by the flow of the resin through the co-extrusion machine. Thus, with the combination of Harris who teaches varying the path

Art Unit: 1794

of extrudate by the flow of the resin using a pump system, it can be shown that various paths and patterns may be formed by using the pump system of Harris with the co-extrusion machine and patterns of Ono to form a gradient system with intersecting patterns.

6. Claims 5 and 12 have been canceled
7. Claims 8-14 stand withdrawn from consideration.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ELLEN S. WOOD whose telephone number is (571)270-3450. The examiner can normally be reached on Monday-Friday 7-5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carol Chaney can be reached on 571-272-1284. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1794

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Ellen S Wood
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Art Unit 1794

/Carol Chaney/
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